Army Field Feeding for Transformation Forces

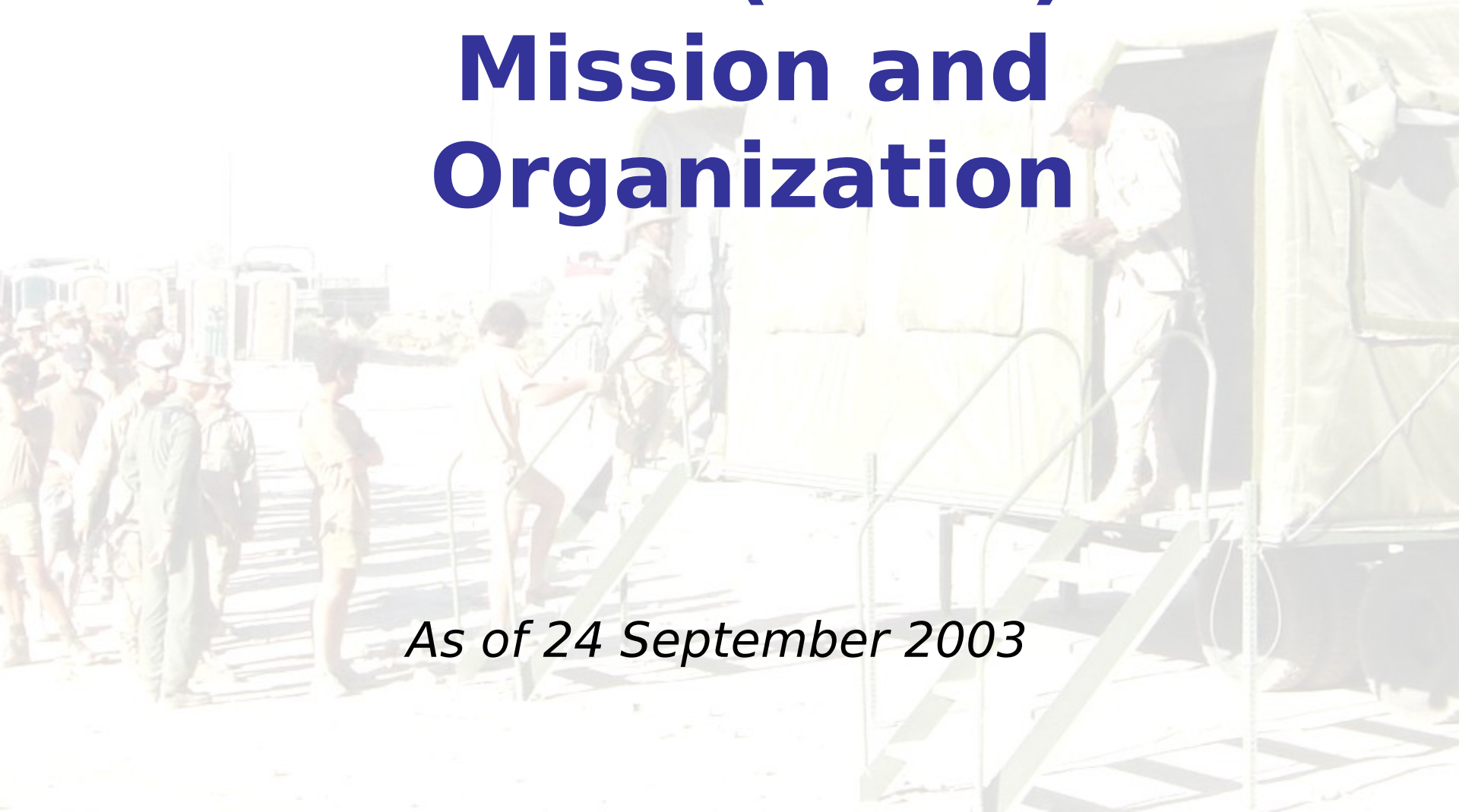
Mr. Albin R. Majewski, CAP, CPL
USA CASCOM
Combat Developments for Quartermaster

As of 24 September 2003

Topics

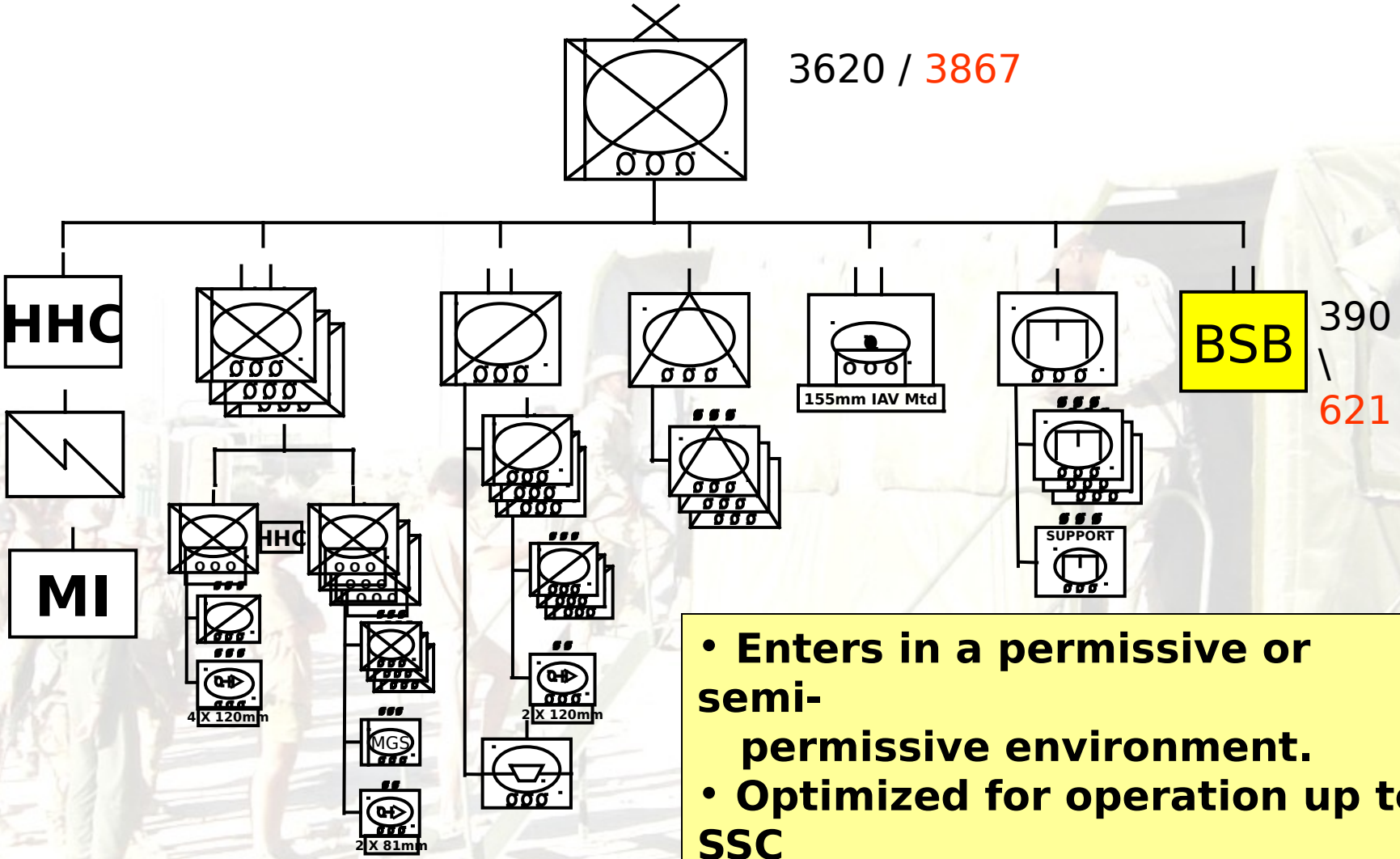
- Stryker Brigade Combat Team (SBCT)
- Future Force
- Future Force Feeding Standard

Stryker Brigade Combat Team (SBCT) Mission and Organization



As of 24 September 2003

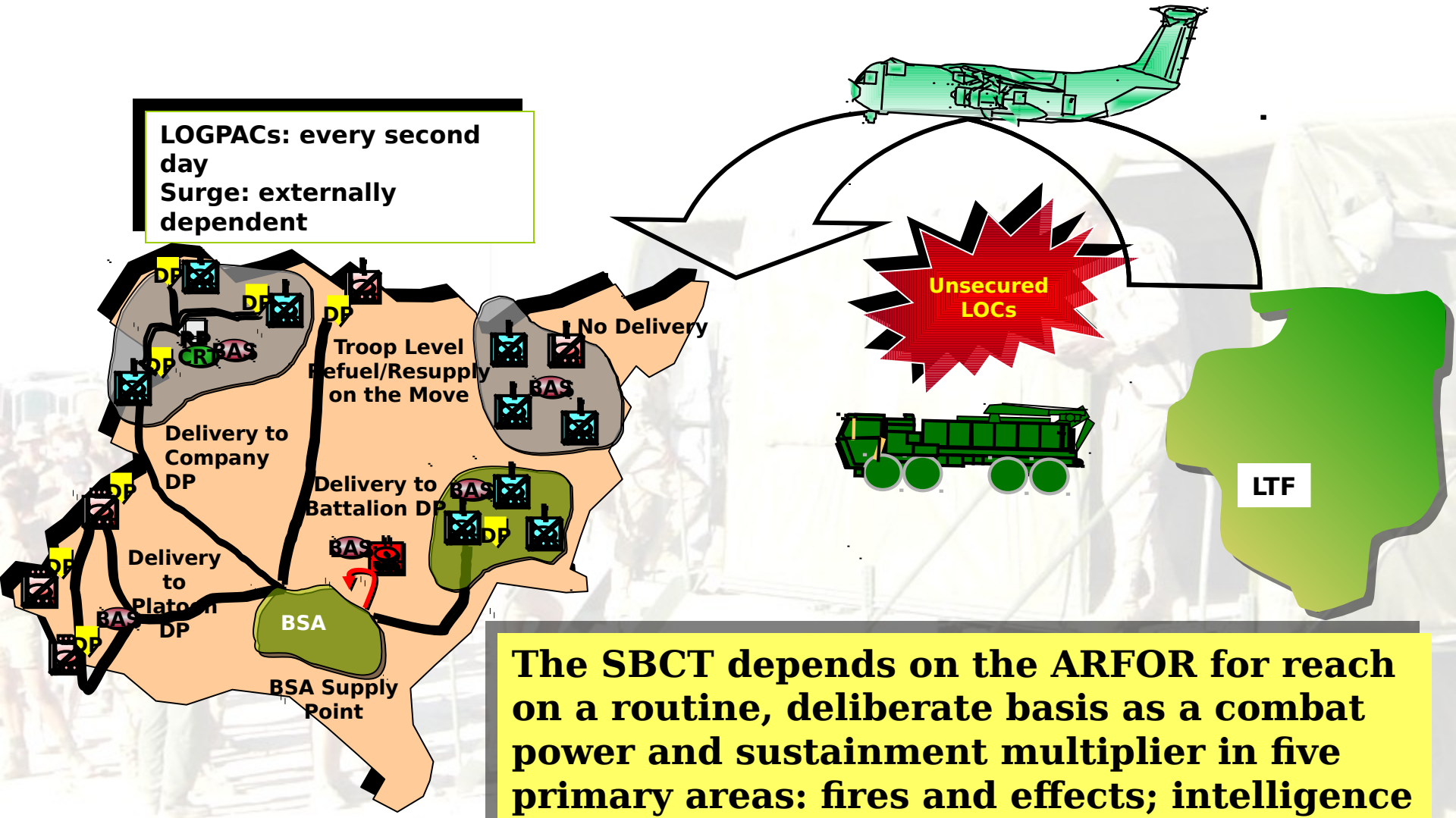
Stryker Brigade Combat Team



- **Enters in a permissive or semi-permissive environment.**
- **Optimized for operation up to SSC level; can conduct operations in MCO with augmentation.**

** Numbers in red show CSSC incorporated into BSB.

SBCT As A Part Of ARFOR/Corps



The SBCT depends on the ARFOR for reach on a routine, deliberate basis as a combat power and sustainment multiplier in five primary areas: fires and effects; intelligence and information; planning and analysis; force protection; and sustainment. FM 3-21.31 (draft)

CSS General Concept of Support
(High Intensity)

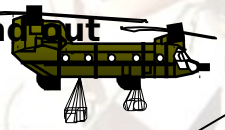
ASSUMPTIONS

- Offensive Ops are 15 days in duration
- SBCT conducts Urban OPNS
- BSB relocates every 10 days
- Aviation lift is required to optimize sustainment
- Fuel, AMMO and water are critical
- LOCs are unsecure, BSB force protection critical
- Box can expand out to 100x100Km

Critical Concepts

- SBCT O&O
- Superior situation understanding
- Split –based OPS
- Distribution Based
- Thru-put
- Resupply on an as-needed basis

Sustaining Base



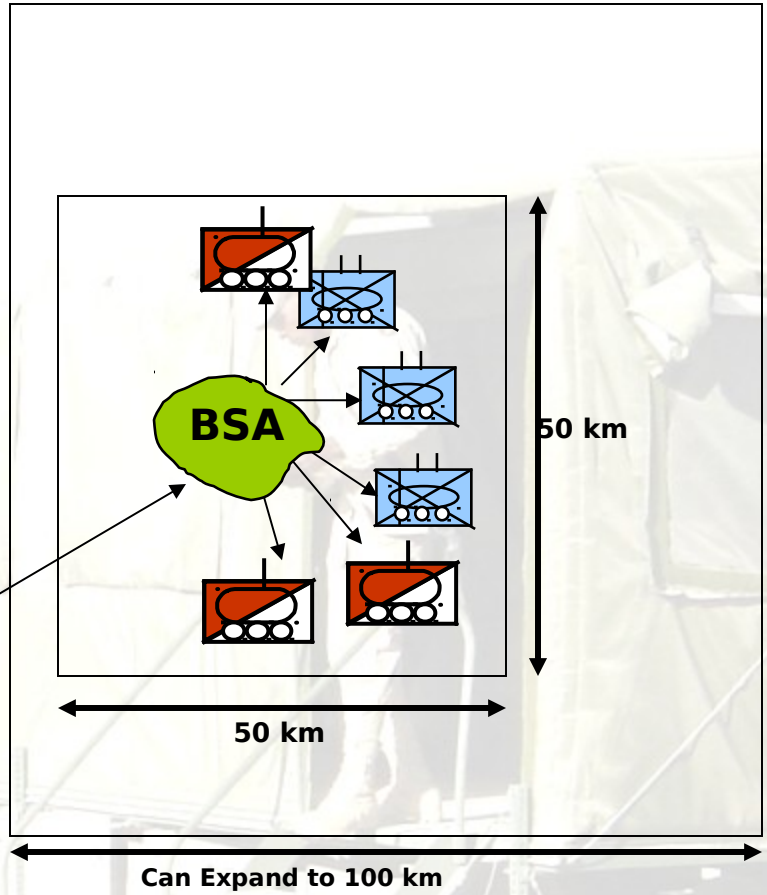
80 km

MCT

DMC (-)

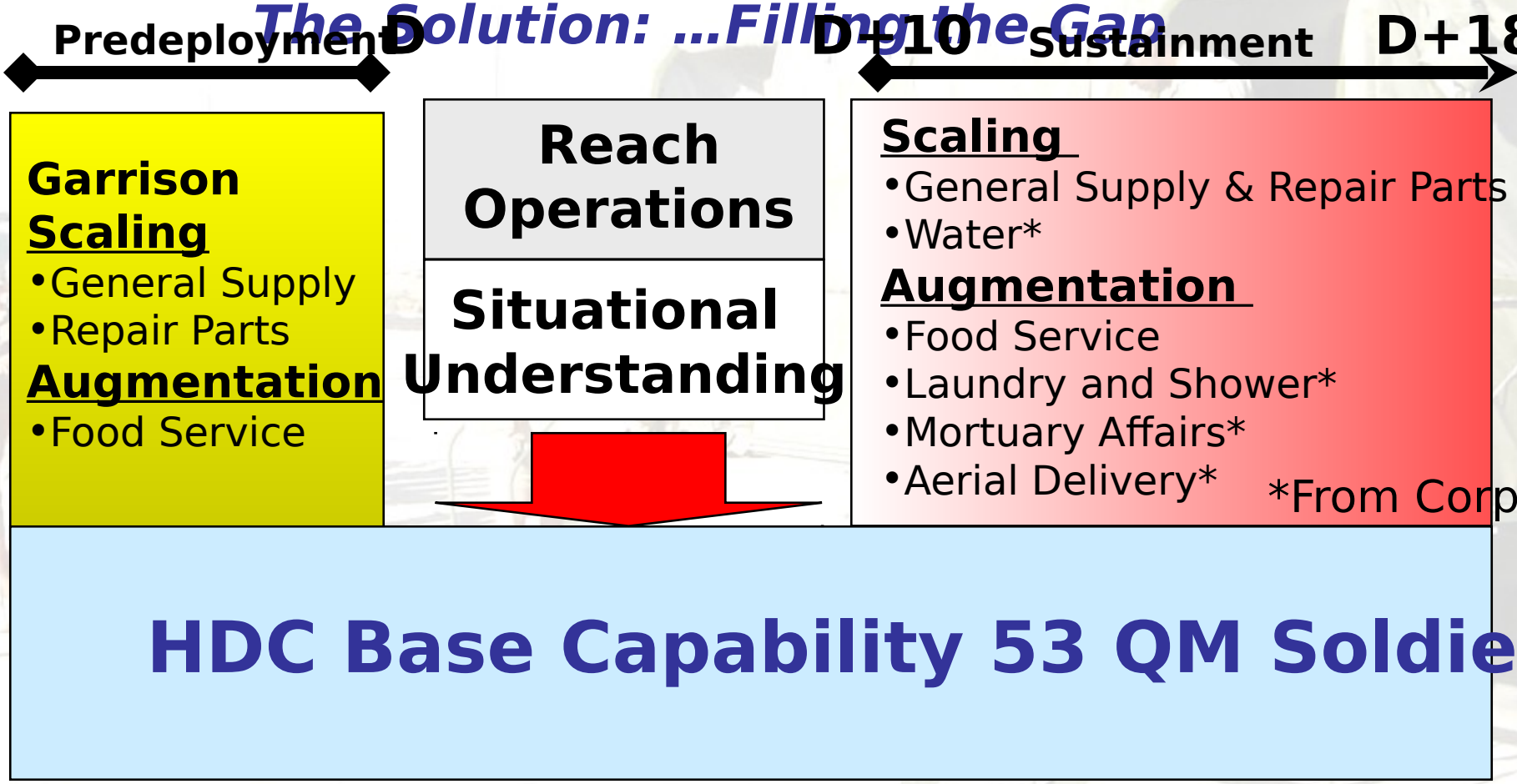
MMT

LTF APOD

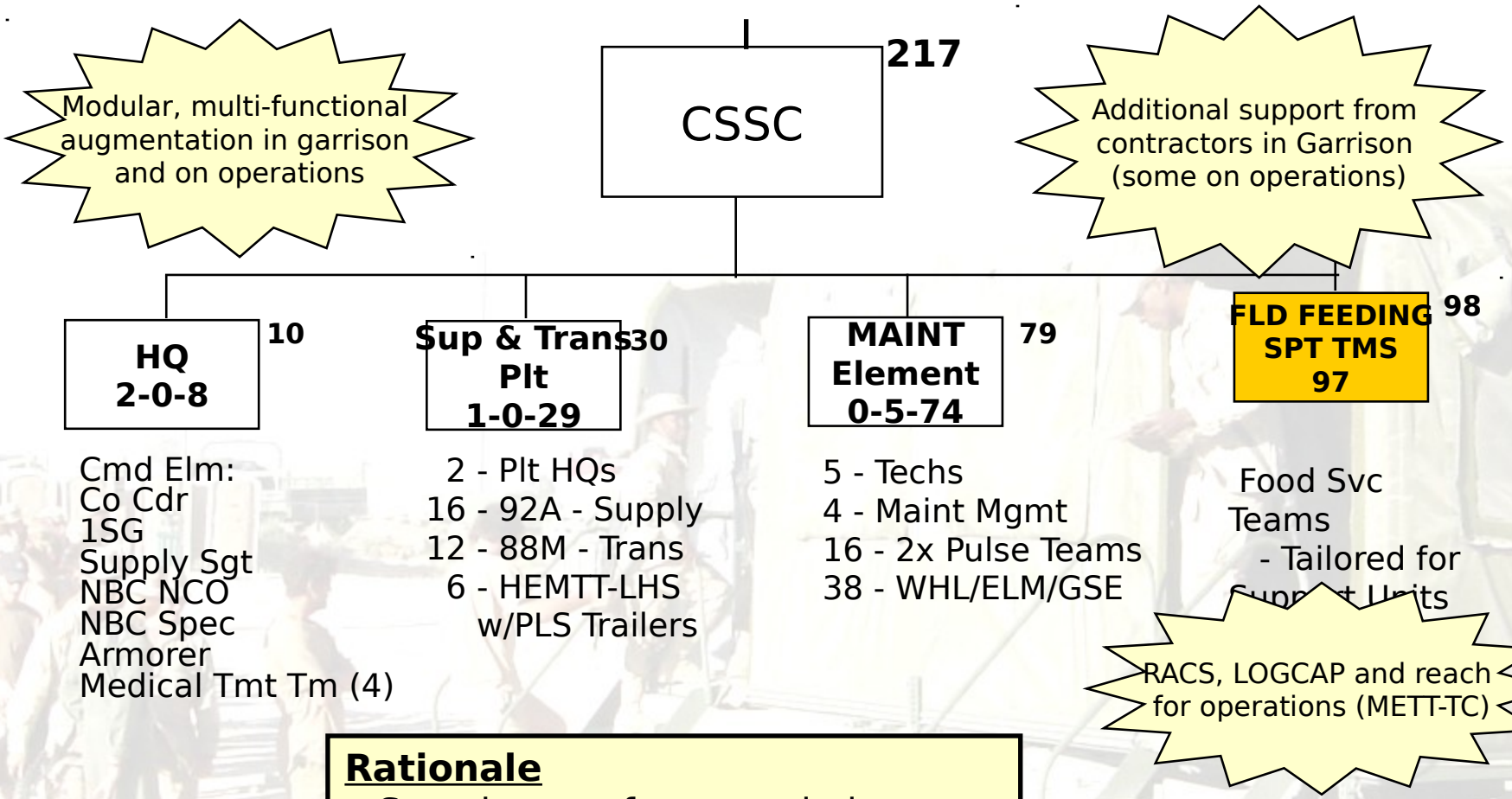


Today Our Challenge is : Providing support with reduced footprint until augmentation arrives after D+10 (METT-T dependent)

The Solution: …Filling the Gap



Approved CSSC



Rationale

- Sustainment for extended operations
- Distribution support for Class V
- Adds cooks to SBCT
- Improves maintenance capabil

- **No personnel movement**
- **No air medevac**

Current Cook Breakdown

			Para 2	Para 3(x3)	Para 4	Para 5	
SR FOOD OPNS MGMT NCO	E7	92G40	1	1	1	1	
SR FIRST COOK	E6	92G30	2	2	1	2	
COOK	E5	92G20	3	4	2	3	
COOK	E4	92G10	6	6	2	4	
COOK	E3	92G10	5	6	3	4	
	Paragraph Total		**17**	**19**	**9**	**14**	**97**

- Paragraph 2 = Brigade and RSTA
- Paragraph 3 = Infantry (x3)
- Paragraph 4 = Field Artillery
- Paragraph 5 = Brigade Support Battalion

TWO INTERIM BRIGADE COMBAT TEAMS AT FT. LEWIS, WASHINGTON:

THE 3RD BRIGADE, 2ND INFANTRY DIVISION (02)

THE 1ST BRIGADE, 25TH INFANTRY DIVISION (02)

THE NEXT BRIGADES TO TRANSFORM WILL BE:

THE 172ND INFANTRY BRIGADE, FORTS RICHARDSON AND WAINWRIGHT, ALASKA (04);

THE 2ND ARMORED CAVALRY REGIMENT (LIGHT), FORT POLK, LOUISIANA;

THE 2ND BRIGADE, 25TH INFANTRY DIVISION (LIGHT), SCHOFIELD BARRACKS, HAWAII;

THE 56TH BRIGADE OF THE 28TH INFANTRY DIVISION (MECH), PENNSYLVANIA ARMY NATIONAL GUARD.

Corrected Cook Breakdown

			Para 2	Para 3(x3)	Para 4	Para 5	
SR FOOD OPNS MGMT NCO	E7	92G40	1	1	1	1	
SR FIRST COOK	E6	92G30	2	2	1	2	
COOK	E5	92G20	3	4	2	3	
COOK	E4	92G10	7	7	3	5	
COOK	E3	92G10	5	6	3	4	
	Paragraph Total		**18**	**20**	**10**	**15**	**103**

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Sustain the Force
CL I and Food Service Support

What's Different Today

- No organic cooks
- Augmentation, military or other, arrives and is operational by D+20

Enablers

- Mounted Water Ration Heater (IAV ORD)
- Unitized Group Rations
- Containerized Kitchen (FUE Jan 02)
- Multi-Temperature Refrigerated Container System (FUE 4Q 05)

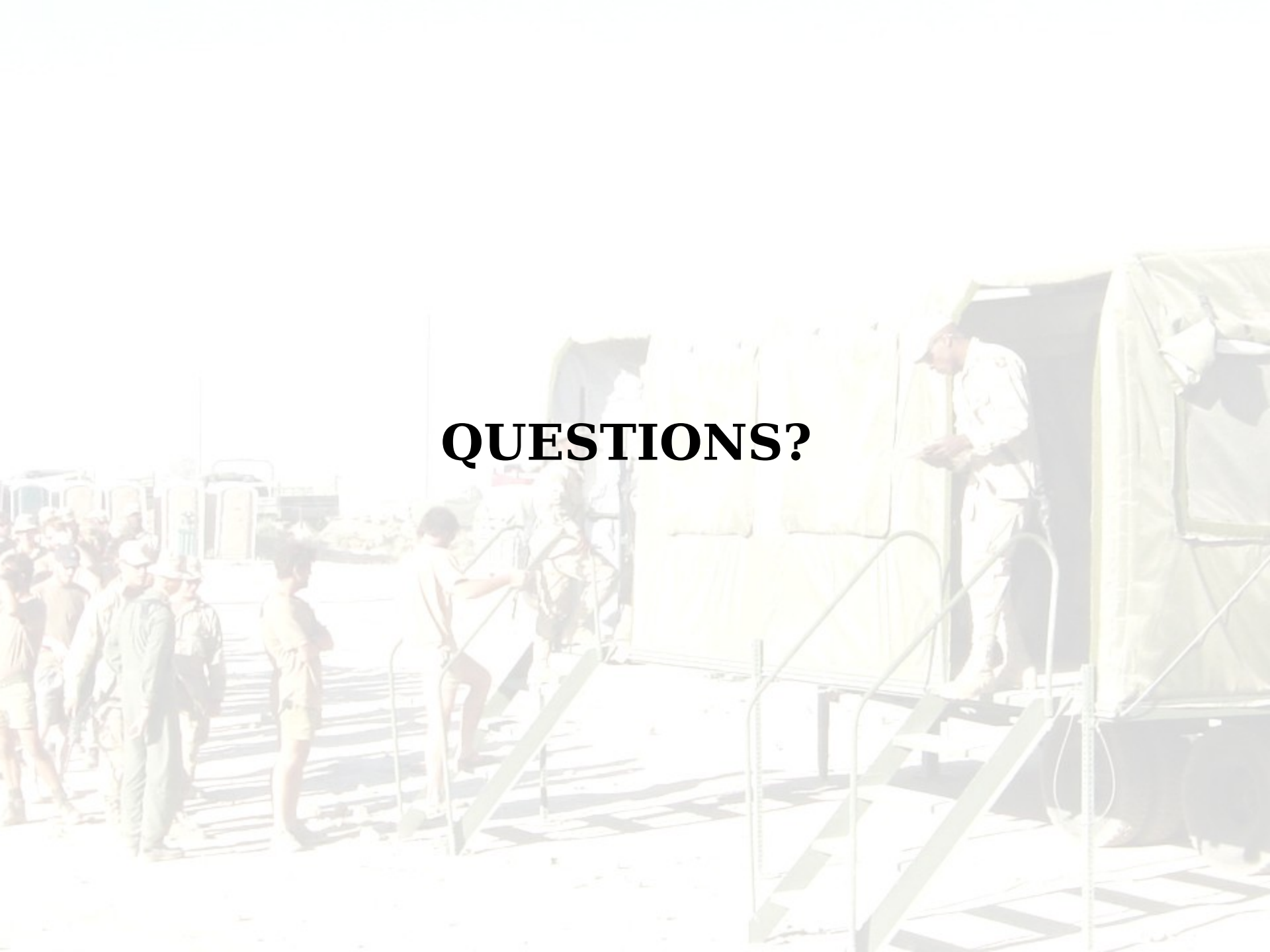
Replaces KCLFF

What's Being Done

- Incorporating CSSC into BSB.

What I want to leave you with…

- There are currently no cooks organic to the SBCT.
- Cooks belong to the CSSC that supports the SBCT.
- **In process of incorporating CSSC into BSB**.
- Currently 97 Cooks and 1 Platoon Leader – *should be 103 cooks*
- **6 Field Feeding Teams**.
- **Equipped with latest enablers**
  - Containerized Kitchen (Fielded Jan 02) (6)
  - KCLFF w HMMWV and High Mobility Trailer (20) *Assault Kitchen will replace KCLFF* (20)
  - Refrigerated Container (6) *MTRCS is replacement* (6)
  - Water Buffalo (11) Camel is replacement (6)
  - MTV 5 Ton Cargo Truck (17) will be reduced to (12)
  - HEMTT-LHS (6) *PLS trailer being added (6)*
- **Support via Configured Loads not Ration Break Points.**



QUESTIONS?

The Future Force

As of 24 September 2003

Purpose

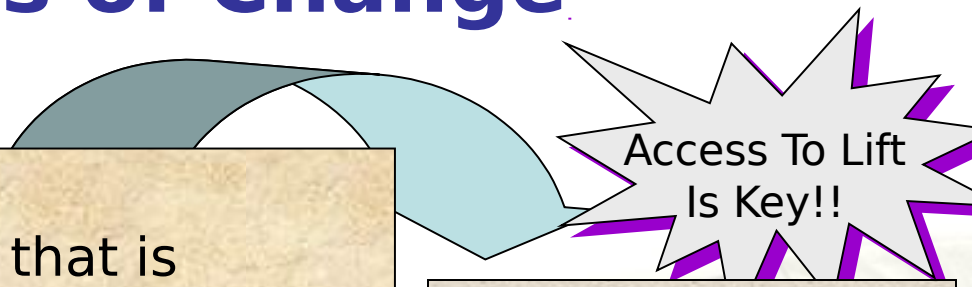
- Provide an overview of the Future Force Maneuver Sustainment Concept
- Familiarize audience with Objective Force Concepts and Terminology
- To increase the understanding the Army’s Objective Force Support Concepts

Key Points

- Non-Contiguous Battle Field (No Boundaries)
- UA vs. UE
- Pit Stop Operations
- Sustainment terms:
  - Combat Replenishment Operations (CRO)
  - Sustainment Replenishment Operations (SRO)
  - Mission Staging Operations (MSO)

Dynamics of Change

The Army Vision
Transform the Army into a Force that is ***Strategically Responsive*** and ***Dominant*** at any point on the Spectrum of Operations.



1 Bde in 96 hrs
1 Div in 120 hrs
5 Divs in 30 days

Vision Impacts The Entire Army (and the Joint Comm

Maneuver Sustainment Goals

- **Enhance Strategic Responsiveness - Meet Deployment Timelines**
- **Reduce Logistics Footprint**
- **Reduce Total Obligation Authority (TOA) for Maneuver**

Build, generate and sustain combat power

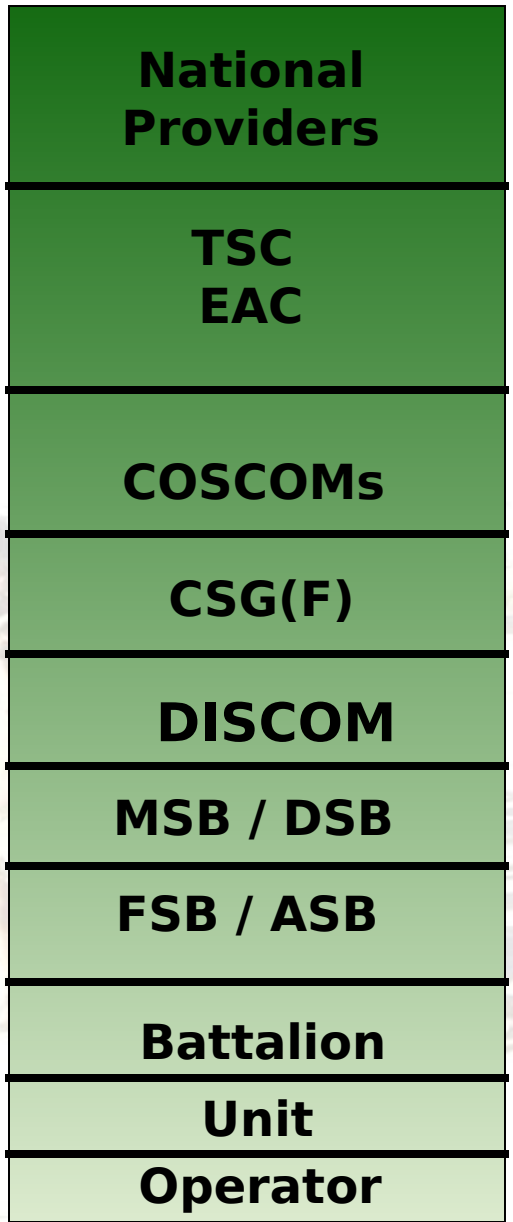
The OF Organizational "Model"

Leaner, "Right-sized"

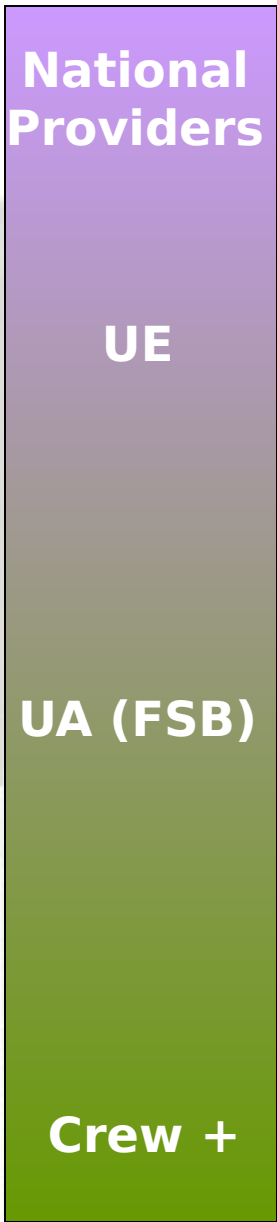
- Meet deployment guidelines
- Reduce CS/CSS footprint
- Reduce the cost of sustainment without reducing effectiveness and readiness

- Supply-based Logistics System
- Monolithic

- Distribution-based Logistics System
- Joint capabilities
- Maneuver Support capabilities
- Air sustainment capability



Today → Objective

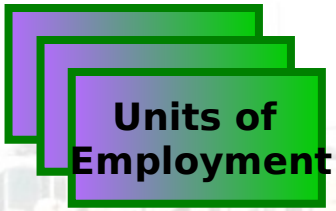


Objective Forces

Combatant Commander

Enable Full Spectrum Joint, Coalition, and Interagency operations…

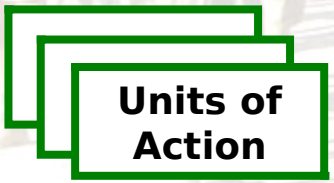
- **Units of Employment--** Link ground forces and joint assets from battle to campaign:
  - ✓ Combined arms air-ground task force
  - ✓ Resource and execute decisive operations
  - ✓ Designate Objective Areas
  - ✓ Coordinate multi-service, interagency, multi-national, and non-governmental activities
  - ✓ Coordinate long range fires, aviation and sustainment
  - ✓ Provide C4ISR and tactical direction to Units of Action



U E

Division and Above

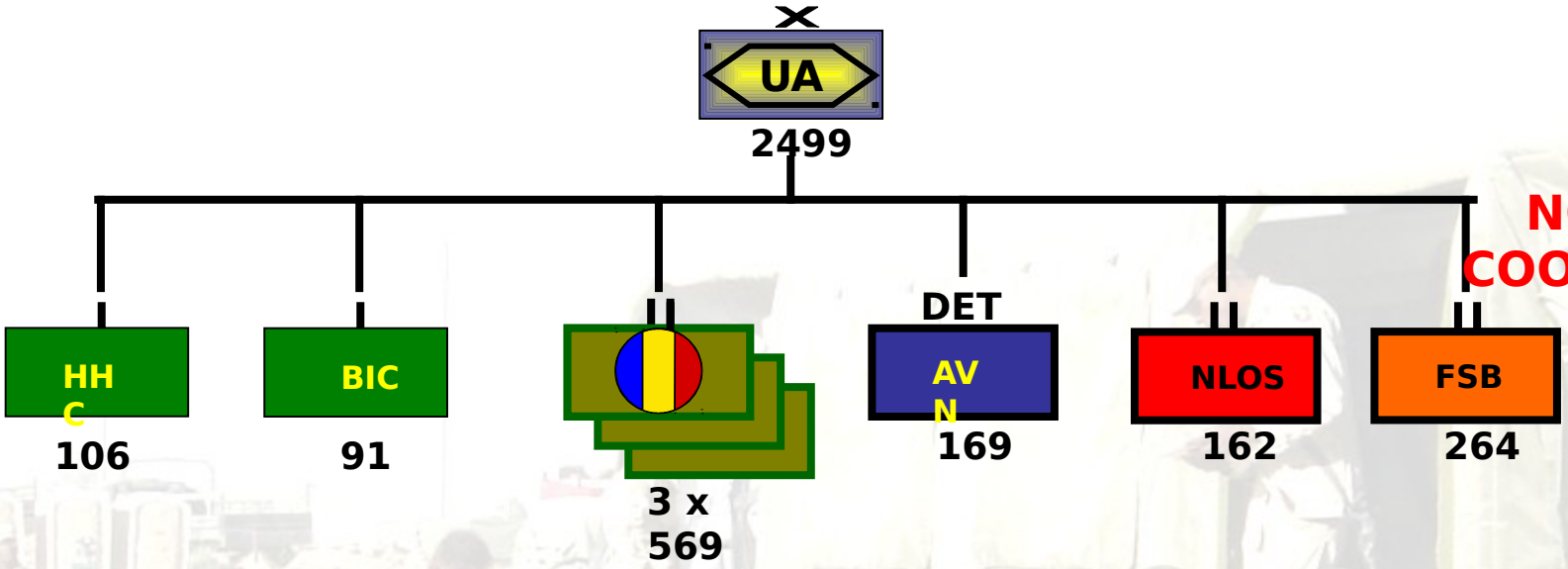
- **Units of Action --**
  - ✓ Standing combined arms units that can be committed independently
  - ✓ Reconfigurable to mission need
  - ✓ Close with and destroy enemy forces in integrated engagements
  - ✓ Finish decisively by fire and maneuver and tactical assault



U A

Brigade and Below

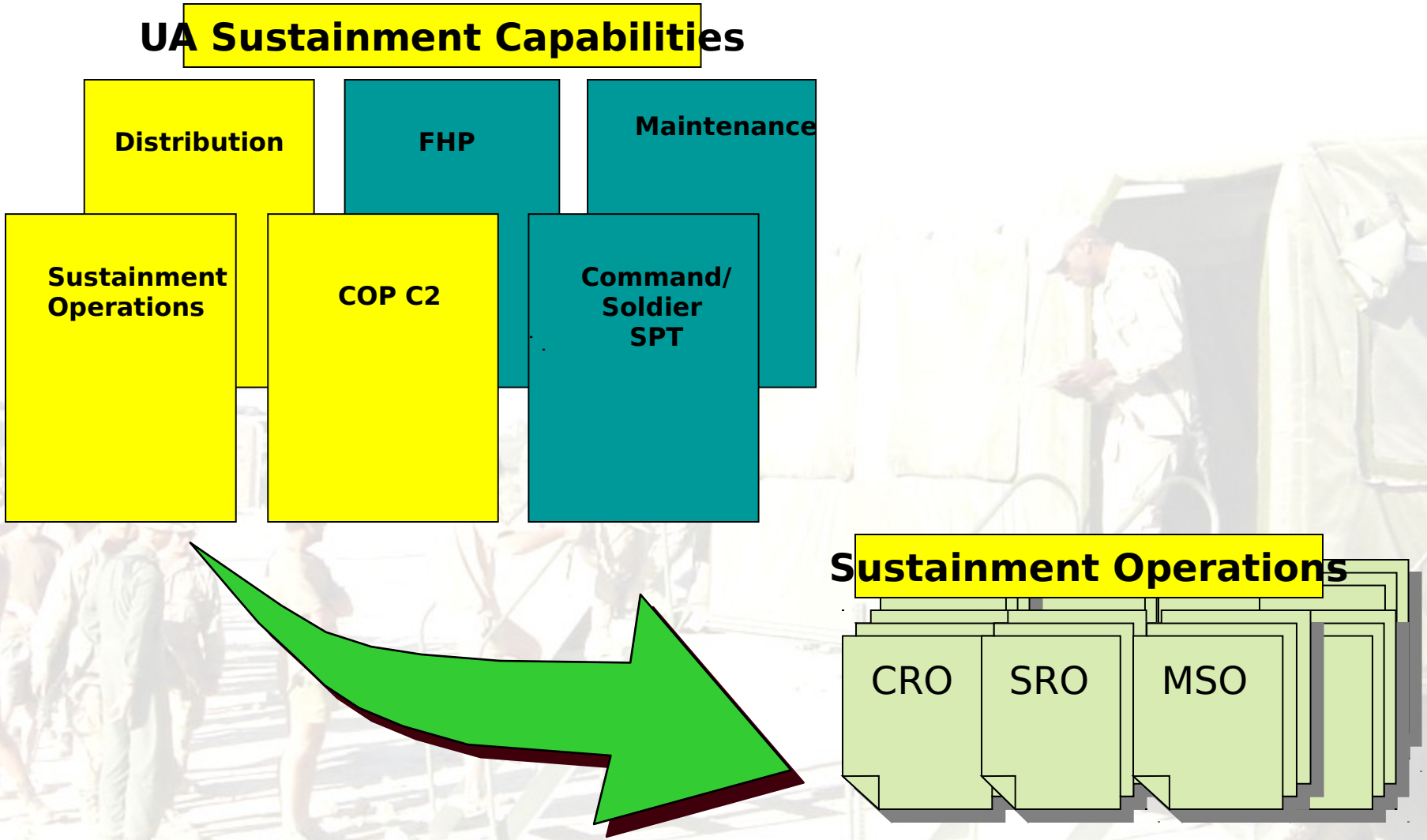
Unit of Action Design



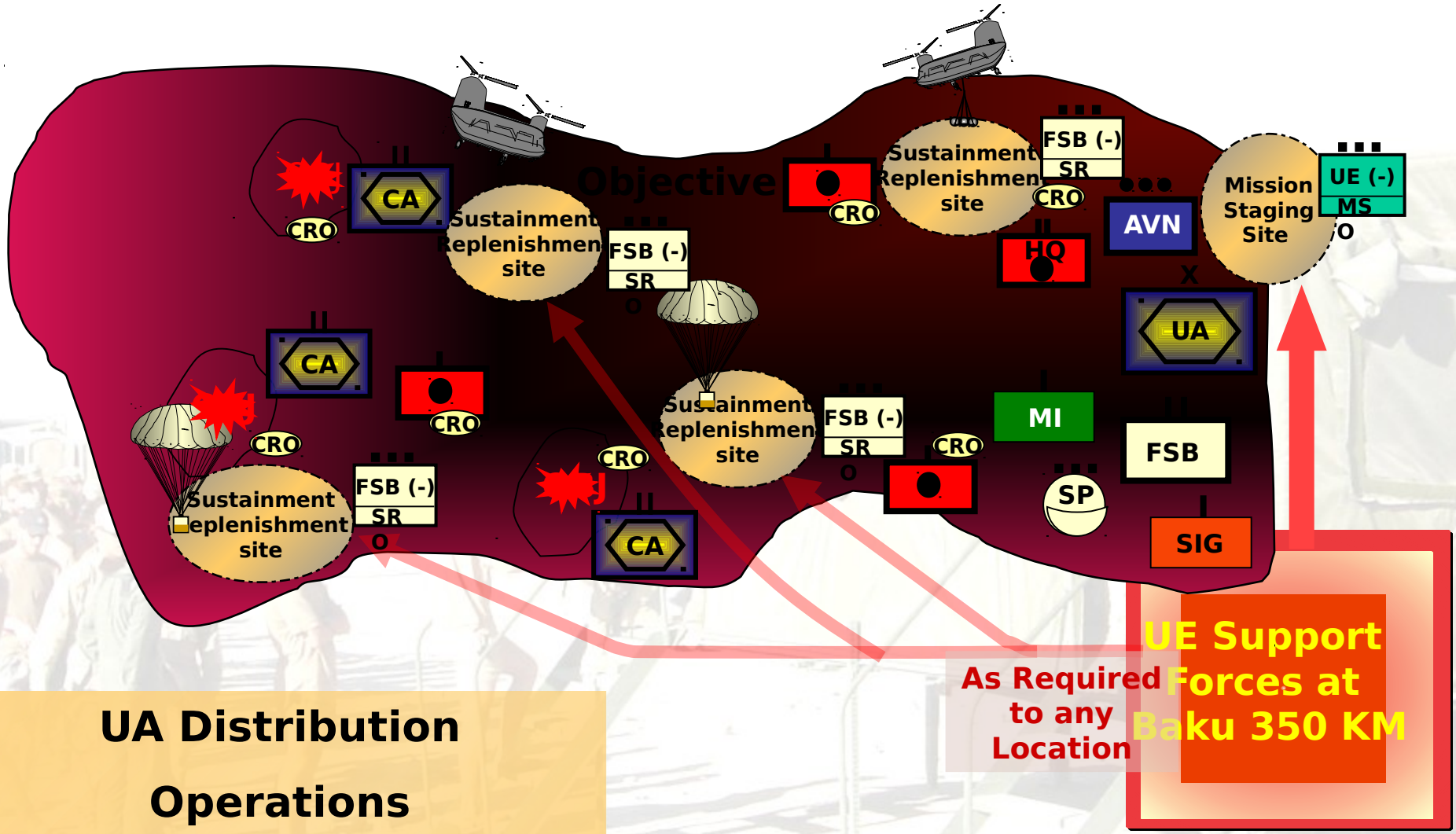
2499 TOE Personnel

78	ICV		64	FTTS-U (C2)	
79	C2V		86	FTTS-U (SPT)	
27	R&SV		204	FTTS-MS	
54	Mounted Combat Systems		4	FTTS-AMB	
24	NLOS Mortar		6	Multi-Mission Radar	
18	NLOS Cannon		54	UAV CL I	
63	ARV		36	UAV CL II	
60	NLOS LS		12	UAV CL III Lnchr/Control	
12	RAH-66		2	UAV CL IV Lncher/Control Units	
29	FCS MV		60	MULES	
10	FRMV		99	SUGV	

Executing Sustainment



UA Distribution Concept



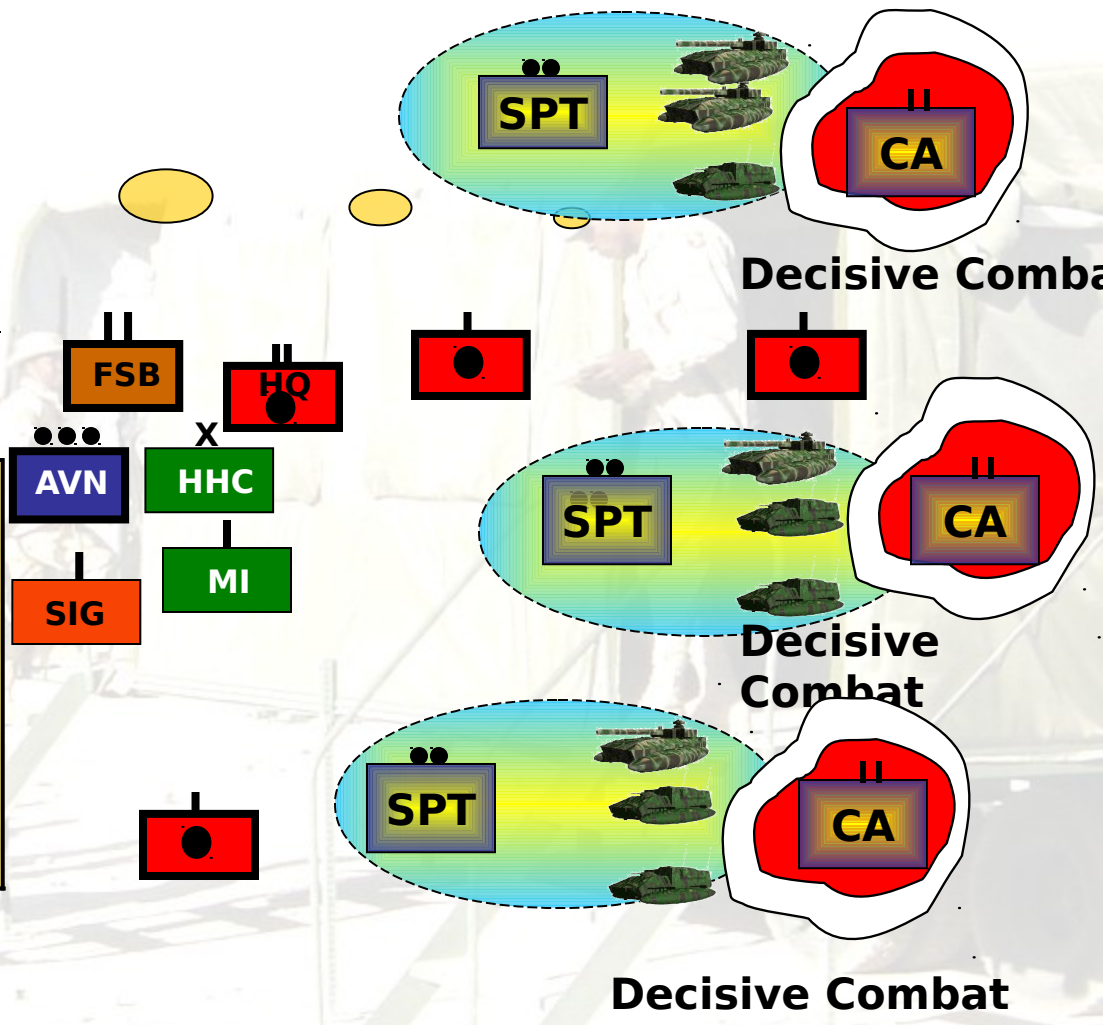
UA Distribution Operations

- Combat Replenishment Ops (CRO)
- Sustainment Repleneshment Ops (SRO)

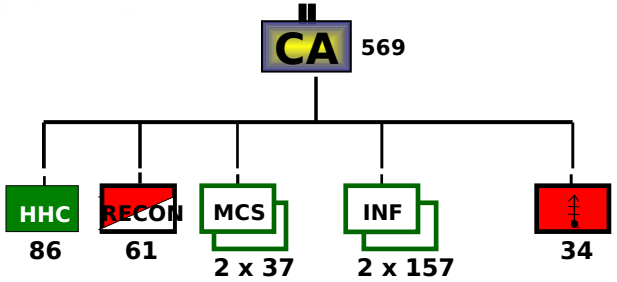
Combat Replenishment Operations (CRO)

Conducted between the support section and the Platform

- Quick / in-stride
- Fits within the battle rhythm
- Primarily deliberate, but hasty also
- Rearm, refuel, cross-leveling of supplies and on-board spares
- Class VIII re-supply, transfer / evacuate casualties

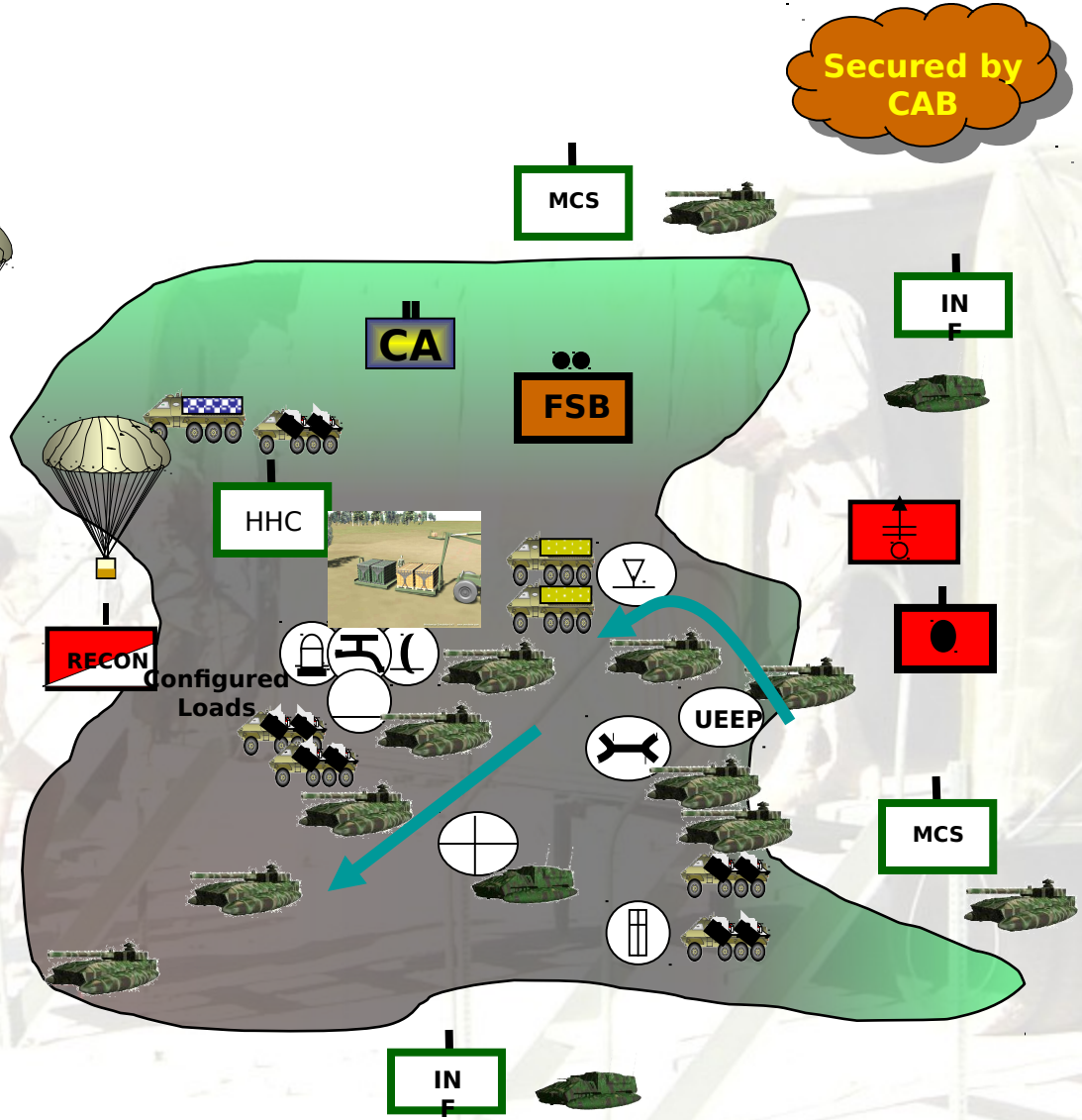


Sustainment Replenishment Operations (S



FSB / UE distributes to the Support Section and/or to Platform (METT-TC)

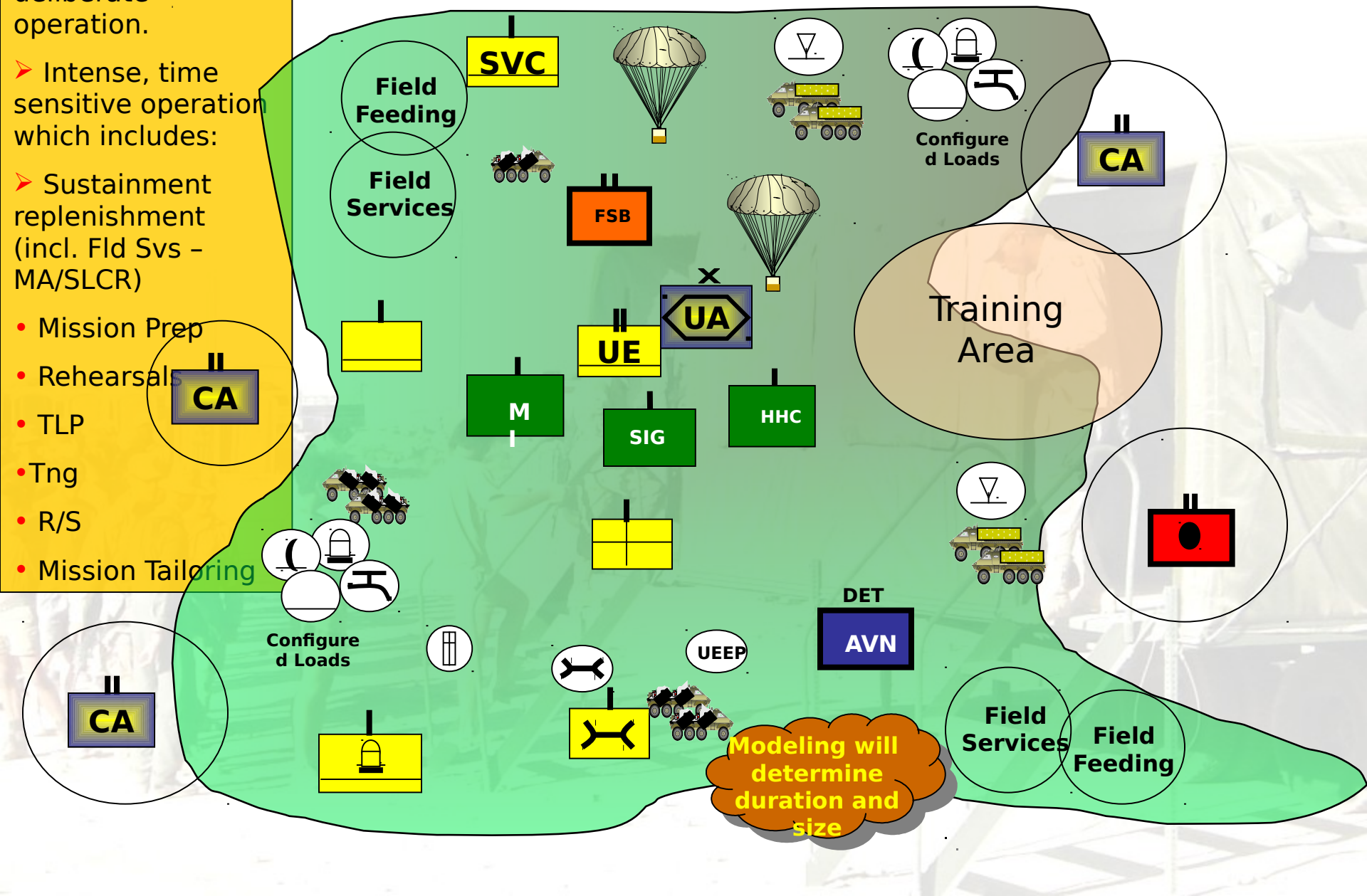
- Quick, in stride, sustainment operation
- Insynch with the Mnvr Cdr's battle rhythm
- "Pit-stop" operation
- Can be either deliberate or hasty (METT-TC)
- Rearm, refuel, fix, medical support, field svcs (MA) and personnel replacement activities occur as required to meet



Mission Staging Operations

Conducted by UE

- A planned deliberate operation.
- Intense, time sensitive operation which includes:
- Sustainment replenishment (incl. Fld Svs – MA/SLCR)
  - Mission Prep
  - Rehearsals
  - TLP
  - Tng
  - R/S
  - Mission Tailoring



Summary

- Non-contiguous very disperse battlefield
- UA self sustaining 3-7 days
- Warfighting concepts dictating support
  - No cooks in UA
  - All cooks in UE
- UE structure being developed over next 2 years
- Feeding Standard will be discussed in next part of the presentation

Questions?

Future Force

(Formerly Objective Force)

Field Feeding Standard

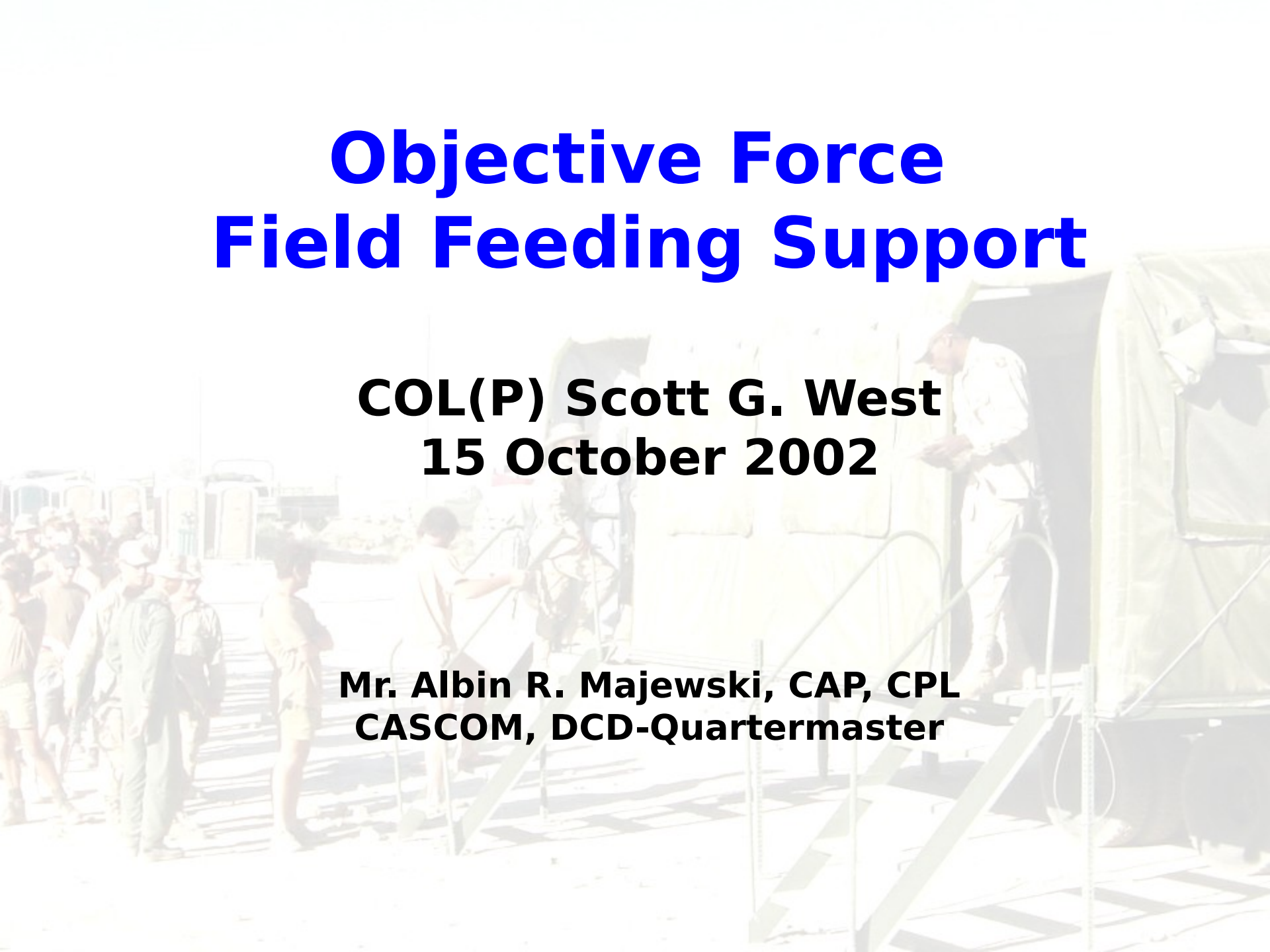
World Wide Food Conference
9-10 October 2003

Mr. Albin R. Majewski, CAP, CPL
CASCOM, DCD-Quartermaster

Objective Force
Field Feeding Support

COL(P) Scott G. West
15 October 2002

Mr. Albin R. Majewski, CAP, CPL
CASCOM, DCD-Quartermaster



Current Field Feeding Standard
(Army Field Feeding System-Future)

- "Three quality meals per day with the capability to distribute, prepare, and serve at least one A-ration meal per day (METT–T dependent) with the other two meals coming from the family of operational rations (individual/group) METT-T dependent.
  - **One standard fits all.**
  - **Approved by Chief of Staff - 2 June 92**
  - **Increased A-ration meal from one every third day to one per day**.
- Reality - Commanders see the positive impact a cook prepared meal has on morale, want them as soon as and as often as possible.
- Reality – Soldiers when decisively engaged are willing to subsist on the MRE without complaint, but when there is downtime they want, and expect, a full cook prepared meal to include mandatory supplement (UHT Milk) and expected enhancements (Fruit, Salad, Bread) or they consider it inadequate.

Proposed Field Feeding Standard

Objective Force (UA) and (UE) / Current Force

- **Initial Entry and UA Non-SRS/MSS Feeding Standard:** Three quality meals per day. This would include the Meal Ready-to-Eat (MRE), First Strike Ration (FSR), Compressed Meals, and possibly the Remote Unit Self Heating – Meal (RUSH-M).

- **SRS Feeding Standard:** Three quality meals per day. Same as initial entry however the UA may be able to receive (METT-TC dependent) one hot, cook-prepared meal (UGR-H&S) (with enhancements when capable) at an SRS if the warfighting commander requests it.

- **MSS Feeding Standard:** Three quality meals per day, with the capability to distribute, prepare and serve the UA two hot, cook–prepared, meals per day (UGR-A/UGR-H&S) with enhancements at MSS sites (METT-TC dependent).

- **Current Force / UE Feeding Standard:** Three quality meals per day, with the capability to distribute, prepare, and serve at least one UGR-A meal per day (METT–TC dependent) with the other two meals coming from the family of operational rations (individual/group) (METT-TC dependent).

Proposed Objective Force Field Feeding Standard Equipment:

- **Initial Entry, CRO and UA Field Feeding Equipment:** None

∀ • **SRS Field Feeding Equipment:**

- **The Assault Kitchen (AK) (Being Documented)**
- *** The AK with a Multi-Temperature Refrigerated Container System (MTRCS) (METT-TC) for enhancements.**

∀ • **MSS Field Feeding Equipment:**

- **The Containerized Kitchen (CK) with a Food Sanitation Center (FSC) and MTRCS; or**
- **The Battlefield Kitchen (BK) (ORD being developed) and MTRCS.**

∀ • **UE (Current Force) Field Feeding Equipment:**

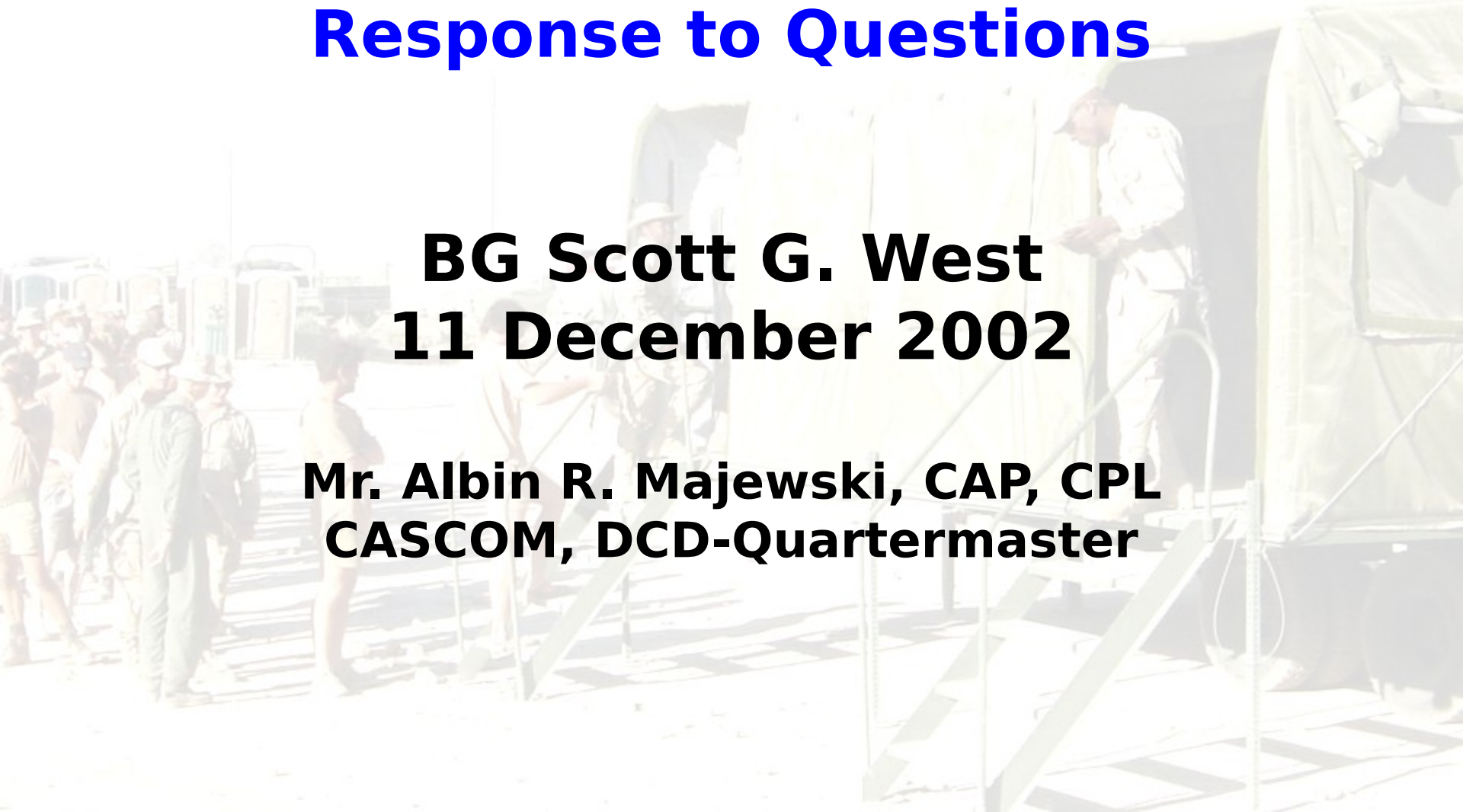
- **The CK with a FSC and MTRCS; or**
- **The BK with a MTRCS, or**
- **The MKT with a FSC, and MTRCS**

- Note: The BK incorporates sanitation therefore it does not require an FSC.

Summary

- The Proposed Field Feeding Standard is for:
  - Unit of Action
  - Unit of Employment / Current Force
- Objective Force Field Feeding Enablers include:
  - Class I: MRE, FSR, RUSH-M, and Compressed Meals
  - Equipment: AK, BK, CK, and MTRCS
- Request your concurrence with the proposed Objective Force Field feeding standard.

Objective Force
Field Feeding Support
Response to Questions



BG Scott G. West
11 December 2002

Mr. Albin R. Majewski, CAP, CPL
CASCOM, DCD-Quartermaster

Response to Question 1

- Did ACES review? Yes sir.
  - ACES, along with PM Force Sustainment Systems, the DOD Combat Feeding Program, the CSSBL, G-4 and DCD-QM were part of the team that put together this standard for the Objective Force based upon Mission Staging and Sustainment Replenishment Operations. At that time (Summer 02) Combat Replenishment Operations (CRO) were not discussed. There is no change with CRO since there are no cooks organic to the Unit of Action.

Response to Question 2

- **Is this standard going to become HQDA Policy? Sir, that is our intent, but formal policy will not come out until closer to the stand up of the Unit of Action. Ms. Adolphi in G-4 was kept abreast of our actions throughout our efforts.**
  - What this does is allow us to have a standard that will go into all documentation being developed so when we talk about field feeding support to the UA and UE there will be some reality. Without it, we have business as usual or worse perception (don't need anything besides MRE's) vs reality (Commanders want hot cook prepared A-Ration meals as often as possible).
    - Currently there is no mention of a hot meal during Sustainment Replenishment Operations (SRO). We feel that this very short-sighted. If a unit will be in a location for a period of time (2-3 hours) for resupply, commanders will want a hot meal (UGR-H&S) for their soldiers.
  - Additionally, without documenting an Objective Force UA/UE standard, and getting it into emerging documents we will have difficulty selling field feeding enablers to decision makers.

Response to Question 3

- **How confident are we in getting FSR, RUSH-M, and compressed entrees into the POM?**
  - Sir, these subsistence items are being developed under the DOD Combat Feeding Program.
    - We have been field testing samples of the FSR with SOCOM with great acceptance and good feedback.
    - The compressed entrée continues to be worked but sampling has occurred and the feedback was positive. This is one of the cornerstones to reducing weight and cube for the FCS.
    - The RUSH-M may be the long pole, higher cost, production of hydrogen gas when heating, and potential lack of acceptance by the field are all issues being worked.
  - When development and testing have been completed and if they have high soldier acceptance the Joint Services Operational Rations Forum (JSORF) will decide upon implementation. G-4 will program funds that would have been used for MRE's and UGR's against these new items. There have already been some spreadsheets prepared to show phase in by the folks at Natick for G-4 planning purposes.

Response to Question 4

- Has this been staffed with the UAMBL? No sir, however it fits what they have been saying except for our belief that we need the AK to support SRO's and they are saying no hot/cook prepared meals except at MSS.
  - It is our intent to get QM / CASCOM support and then provide it to them.
  - If we don't push this the warfighter will ask us for support we can't provide and once again it will be a the loggies can't support us.
  - This is one we must press forward with.
  - *CASCOM Maneuver Sustainment Battlelab supports*
  - *Currently with UAMBL (Fort Knox) for Staffing*

Response to Question 5

- Are the AK and the MTRCS in the POM? BK?
  - **MTRCS** has funding in the POM but as with all field feeding equipment it is spread over a number of years. FUE FY06.
  - **AK**, is not currently in the POM due to not having an ORD. We just received HQ TRADOC feedback on what documentation is required as we are leveraging the USMC approved Tray Ration Heating System ORD. We took funds from KCLFF line in 03 and provided to another PM FSS program which will pay back in FY04. By then we should be able to field to SBCT's as KCLFF replacement , and can work funding in 06-10 POM. Have UFR for $120K that LIA is working to let us demo AK as an enabler. Demo will provide input to BOIP. FUE could be FY04.
  - **BK**, no ORD yet as it is still in S&T and won't need OPA funding until FY11. The BK may/will be costly, both individually and for the AAO as it will replace the remaining MKT's(~ 3000) that will remain after CK fielding. Based on typical funding BK will field over a 15-20 year period. Waiting for new Requirements Generation Document prior to requesting permission to write ORD. **CJCSI signed 24 June now we can begin the process. Intend to have IPT in late August *(3 Oct 03)* to discuss complete requirement.**

Response to Comment

- Appears we built a standard around rations and equipment that are as yet non-standard. Lets talk.
  - Sir, The final standard will not be implemented until UA and UE get fielded. Our effort here is to identify what that standard should be based upon current MRE, UGR's, CK etc… and proposed future items. Once they get into documentation Concepts and Doctrine) we then can push forward because they are recognized. Without recognition it is like swimming up stream.

Summary

- The Proposed Field Feeding Standard is for:
  - Unit of Action
  - Unit of Employment / Current Force
- Objective Force Field Feeding Enablers include:
  - Class I: MRE, FSR, RUSH-M, and Compressed Meals
  - Equipment: AK, BK, CK, and MTRCS
- Request your concurrence with the proposed Objective Force Field feeding standard.

I Concur Drive On! - West

History

- Drafted June-Aug 02 for LTTF
- Provided to BG West 02
- Approved BG West Dec 02
- Briefed to JSORF Feb 03
- Briefed to WOAC 28 Mar 03
- Provided to UAMBL May 03
- Briefed to WOBC 8 Jul 03
- Update to MACOM Food Advisors 3 Oct 03
- Brief to WWFC 9-10 Oct 03
- Plan to brief CASCOM CDR Nov 03

Want to Know More?

- **For additional information on Future Force Maneuver Sustainment please contact Mr. Jethro Mann (Anteon) in DCD-QM Concepts Division or Mr. Al Majewski in DCD-QM Materiel Modernization Division**

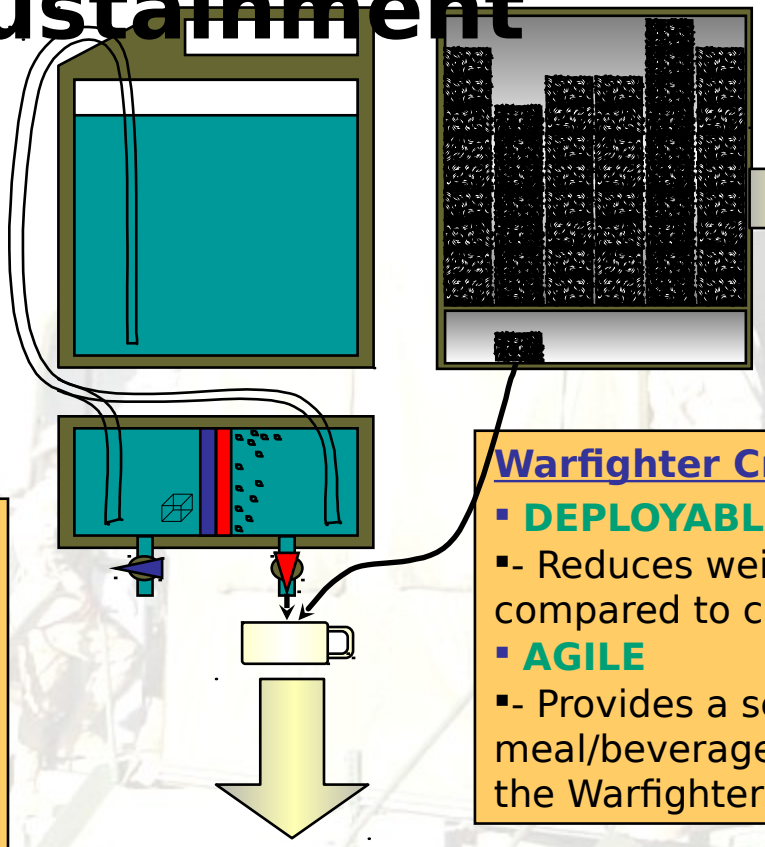
- **Email: Mannj.contractor@lee.army.mil**
  Albin.Majewski@lee.army.mil

- **Phone number: (804) 734-2518 / 1834**

Compressed Meals / Future Combat Systems Crew Sustainment

Concept:

- Provides FCV crew ability to heat/chill water for meals/beverages and limited personal hygiene
- Provides re-hydration/heating capability for compressed meals



Capabilities:

- Uses potable water from FCV exhaust (TARDEC)
- Provides high quality meals in minutes
- Provides chilled or heated beverages
- Reduces weight and cube by 75% and 50% vs MRE
- Allows soldiers to consume meals within FCV

Reduces Weight & cube

Warfighter Criticality:

- **DEPLOYABLE**
  - Reduces weight/cube compared to current systems
- **AGILE**
  - Provides a self-contained meal/beverage capability for the Warfighter

Status/Issues:

- Leverages TARDEC novel water generation/reclamation technology
- Preliminary concept design & development began in FY02

Containerized Kitchen (CK)

Overview:

Mission: Provide a mobile, modern, efficient kitchen serving up to 800 meals up to 3x daily.

Description:

➔3:1 ISO 8x8x20 container with seven Modern Burner Units, two commercial refrigerators, an environmental control unit, a 10KW generator and other required field feeding equipment.

➔ Towed by 5T FMTV; LHS Compatible

➔ Cost is approximately $150,000.

Value:

➔Reduces logistics infrastructure by 1 cook, 1 vehicle, 1 kitchen and 1 FSC, and 6 MBUs when replacing 2 MKTs. Pays for its self.

➔Supports Single Battlefield Fuel (JP8)

➔Significantly improves working environment

Status:

➔FUE 1Q FY02 - 101st

➔CK's are deployed in support of current operations..

Basis of Issue:

Schedule/Funding

FY	2002	2003	2004	2005	2006	2007	2008	2009
Sched	FUE	FLD	FLD	FLD	FLD	FLD		
R&D $	0.34	0.243						
OPA $	4.25	11.15	7.45	7.2	8.08			
UFRs	4.75		5.15	5.4	4.52	12.6	12.6	12.6
Fld Qty	18	61	37	35	39			

Note 1: Fielding was delayed to FY02 due to Trailer Provisioning

Battlefield Kitchen (BK)

Overview:

Mission: Provide a complete, mobile, integrated feeding system serving up to 400 soldiers up to 3 hot meals daily.

Description:

A leap ahead system leveraging S&T (co-generation) to best meet the Warfighter nutritional / feeding requirements.

Value:

- Eliminates separate sanitation center
- Integrates refrigeration
- Enhanced food preparation area
- Co-generation to provide electrical power
- Integrated water production/recycling capability (P3I)

Status:

- Goal: By 2025 BK replaces MKT's
- FY 01-09 RDT&E FY10 LRIP, FY11 FUE
- ORD Development FY04.

Basis of Issue:

- Replaces remaining MKT's

FY	2002	2003	2004	2005	2006	2007	2008	2009
Sched								
RDTE	0.57	0.6	0.7	0.16	0.6	0.8	0.6	
UFRs					0.2			0.4
OPA $								
UFRs								

Assault Kitchen (AK)

Overview:

Mission: Provides heating and serving of the UGR-H&S to company sized elements at an objective force sustainment replenishment site (SRS) or in support of current force remote site feeding. Prepares food for 250 in 90 minutes.

Description:

➔ The AK will be equipped with a Multi-Ration Heater (USAF) that leveraged the (USMC) Tray Ration Heater System. Includes insulated food and beverage containers, work table. Transported on HMMWV and HMT or future replacement.

Value:

➔ Capability to Heat-on-the-Move thus allowing for near immediate serving of meals upon arrival.

➔ Capable of supporting more than one Sustainment Replenishment Site per day.

➔ Replacement for KCLFF (never fully fielded).

Status:

➔ ORD not required – documentation identified.

➔ No current funding.

Schedule / Funding								
FY	2002	2003	2004	2005	2006	2007	2008	2009
Sched								
R&D $								
OPA $								
UFRs		0.120						
Fld Qty								
NOTE 1: SBCT wants this rather than KCLFF.								